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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/855,851  | 05/16/2001  | David F. Sorrells    | 1744.1260001        | 9178             |
| 26111   | 7590        | 04/01/2005           | EXAMINER            |                  |
| STERNE, KESSLER, GOLDSTEIN & FOX PLLC<br>1100 NEW YORK AVENUE, N.W.<br>WASHINGTON, DC 20005 |             |                      | LE, LANA N          |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2685                |                  |
| DATE MAILED: 04/01/2005   |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/855,851

Applicant(s)

SORRELLS ET AL.

Examiner

Lana N Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 23-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23 and 29-32 is/are rejected.
- 7) ☒ Claim(s) 24-28, 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/16/04, 8/16/02
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claim 23 is rejected under the judicially created doctrine of double patenting over claim 20, 24, and 25 of U. S. Patent No. 6,813,485 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

a downconverter with a switch, periodically coupled to a capacitor, the energy storage device, and supplying the energy to a load between each switching.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

3. Claims 23 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 23-25 and 29 of U.S. Patent No. 6,061,551 in view of Sorrells et al (US 6,813,485).

Regarding claim 23, Sorrells et al (US 6,061,551) disclose an apparatus for downconverting comprising a switch module, a storage module coupled to the switch module, and an output impedance device coupled to an output of the apparatus.

However, Sorrells et al (6,061,551) do not specifically disclose:  
The storage module is a capacitor. Sorrells et al (US 6,813,485) disclose a storage module is a capacitor (fig. 90A capacitors at RF inputs; col 85, lines 23-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the storage module be a capacitor in order to store electrical charge so it can be released at a specific time or rate and to cancel DC offset at the switch due to charge injection that might have caused DC offset as suggested by Sorrells et al (US 6,813,485; col 85, lines 23-55).

4. Claims 23 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7, 175, and 177

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of U.S. Patent No. 6,049,706 in view of Sorrells et al (US 6,813,485).

Regarding claim 23, Sorrells et al (US 6,049,706) disclose an apparatus for downconverting comprising a switch module, a storage module coupled to the switch module, and an output impedance device coupled to an output of the apparatus.

However, Sorrells et al (6,049,706) do not specifically disclose: the storage module is a capacitor. Sorrells et al (US 6,813,485) disclose a storage module is a capacitor (fig. 90A capacitors at RF inputs; col 85, lines 23-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the storage module be a capacitor in order to store electrical charge so it can be released at a specific time or rate and to cancel DC offset at the switch due to charge injection that might have caused DC offset as suggested by Sorrells et al (US 6,813,485; col 85, lines 23-55).

5. Claims 23 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of US 6,580,902 in view of Sorrells et al (US 6,813,485).

Regarding claim 23, Sorrells et al (US 6,580,902) disclose circuit for downconverting comprising switch, a storage module coupled to the switch (claim 1, 10, 15). However, Sorrells et al (6,813,485) do not disclose the storage module is a capacitor and an output impedance device coupled to an output of the apparatus. Sorrells et al (US 6,813,485) disclose the storage module is a capacitor and an output impedance device coupled to an output of the apparatus

(fig. 90A loads at outputs; col 85, lines 23-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a load coupled to the output of the device in order to match an impedance of said switch to a load impedance, thereby increasing energy transferred from said carrier signal capacitor with a low noise figure and a capacitor to store electrical charge so it can be released at a specific time or rate and to cancel DC offset at the switch due to charge injection as suggested by Sorrells et al (US 6,813,485; col 85, line 5 – col 86, line 42).

6. Claims 23, 29-32 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 10, 15 of US 6,687,493 in view of Sorrells et al (US 6,813,485).

Regarding claim 23, Sorrells et al (US 6,687,493) disclose a circuit for downconverting comprising a FET, a capacitor coupled to the FET (claims 1, 10, 15).

However, Sorrells et al (US 6,687,493) do not disclose: the FET is a switch module and an output impedance device coupled to an output of the apparatus.

Sorrells et al (US 6,813,485) disclose the FET can be a switch module and an output impedance device is coupled to an output of the apparatus (fig. 90A; col 85, line 37 – col 86, line 42; fig. 112). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a load coupled to the output of the device in order to match an impedance of said switch

to a load impedance, thereby increasing energy transferred from said carrier signal capacitor with low noise and the transistor acting as a switch for increased dynamic range as suggested by Sorrells et al (US 6,687,493; col 85, line 5 – col 86, line 42).

***Allowable Subject Matter***

7. Claims 24-28 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

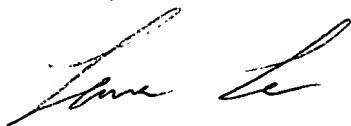
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lana N Le whose telephone number is (703) 308-5836. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F Urban can be reached on (703) 305-4385. The

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fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Lana Le', with a stylized flourish at the end.

Lana Le

March 14, 2005